

CLAIMS

What is claimed is:

1. A power component assembly for mechatronic integration of power components, comprising:
 - a circuit board;
 - a plurality of bare power components arranged on the circuit board;
 - at least one cooling element for dissipating heat generated by the power components; and
 - a pressure-mounting frame connected with the at least one cooling element and holding the power components in heat-conductive contact with the cooling element.
2. The power component assembly of claim 1, wherein the pressure-mounting frame and the at least one cooling element are in locking engagement with each other.
3. The power component assembly of claim 1, wherein the pressure-mounting frame and the at least one cooling element are connected with each other by a screw connection.
4. The power component assembly of claim 1, comprising a plurality of cooling elements which are galvanically isolated from each other.

5. The power component assembly of claim 1, and further comprising a support strip that is mechanically connected with the circuit board and mechanically supports the power components; and at least two connecting strips for each power component, wherein each of the at least two connecting strips is electrically connected with a corresponding electrical contact of the power component and with the circuit board.
6. The power component assembly of claim 5, wherein the support strip and the at least two connecting strips are formed by an SMD technique.
7. The power component assembly of claim 5, wherein the support strip or the connecting strips, or both, are configured to dissipate heat from the power components.
8. The power component assembly of claim 5, wherein the support strip or the connecting strips, or both, are connected with the power components with an adhesive or with solder.
9. The power component assembly of claim 5, wherein major dimensions of the support strip are equal to or greater than major dimensions of the power components.

10. The power component assembly of claim 5, wherein the support strip or the connecting strips, or both, have an S-shaped profile.